



## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: R. Moulton

Serial No.: 10/642,437

Filed: August 16, 1003

For: LEWIS ACID IONIC LIQUIDS

Group Art Unit: 1621

Examiner: Nazario-Gonzalez, Porfirio

Atty. Dkt. No.: **SOU747/4-9US** 

## CERTIFICATE OF MAILING 37 C.F.R 1.8

I hereby certify that this correspondence is being deposited with the U.S. Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Commissioner for Patents, P. O. Box 2327, Arlington, VA 22202, on the date below:

February 1, 2005

Date

Debbie Berroth

## **INFORMATION DISCLOSURE STATEMENT**

Assistant Commissioner of Patents and Trademarks P.O. Box 1450 Alexandria, VA 22313-1450

Sir:

In compliance with the duty of disclosure under 37 C.F.R. § 1.56, it is respectfully requested that this Information Disclosure Statement be entered and the documents listed on the attached Form SB/08 be considered by the Examiner and made of record. Copies of the listed documents are enclosed for the convenience of the Examiner as required by 37 C.F.R. § 1.98(a)(2).

02/07/2005 BABRAHA1 00000019 10642437

01 FC:1806

180.00 OP

In accordance with 37 C.F.R. §§ 1.97(g),(h), this Information Disclosure Statement is not to be construed as a representation that a search has been made, and is not to be construed to be an admission that the information cited is, or is considered to be, material to patentability as defined in 37 C.F.R. § 1.56(b).

Enclosed is a Credit Card Payment Form in the amount of \$180 under 37 CFR § 1.17(p). If any additional fees are required, the Commissioner is authorized to appropriately deduct or credit the requisite amount from Vinson & Elkins L.L.P. Deposit Account No. 22-0365/SOU747/4-9US.

Respectfully submitted,

Doug McClellan

Reg. No. 41,183

Attorney for Applicants

Vinson & Elkins L.L.P. 2300 First City Tower 1001 Fannin Houston, Texas 77002-6760 512/495-8560

Date: January 27, 2005

bcc: Marya Breig, Docket Specialist

467667\_1.DOC

|                        |  |                                     | 001157 |            |                      | ٦                         | 40/040                     | PTO/SB/08A (04-03)                                 |  |  |
|------------------------|--|-------------------------------------|--------|------------|----------------------|---------------------------|----------------------------|--|--|--|
| INFORMATION DISCLOSURE |  |                                     |        |            | Application Number   |                           | 10/642,437                 |  |  |  |
| STATEMENE BY APPLICANT |  |                                     |        |            | Filing Date          |                           | August 15, 2003            |  |  |  |
|                        | 10   | 10 3 2005 E O ES                    |        | First I    | First Named Inventor |                           | Moulton                    |  |  |  |
|                        | 1,   | EB 03.                              |        | Grou       | Group Art Unit       |                           | 1621                       |  |  |  |
|                        | 10   |                                     |        | Exam       | Examiner Name        |                           | Nazario Gonzalez, Porfirio |  |  |  |
| Sheet                  | 1  | ENT & TRADE OF                      | 4      | Attorr     | Attorney Docket SOU7 |                           |                            | 7/4-9US  |  |  |
|                        |  |                                     |        | U.S. PATEN | PATENT DOCUMENTS     |                           |                            |  |  |  |
| Examiner<br>Initials   | Cite   | Document Number                     |        |            | r                    |                           | cation Date                | Name of Patentee or Applicant of Cited             |  |  |
|                        | No.  |                                     | Number |            | Kind Code (if known) |                           | DD-YYYY                    | Name of Patentee or Applicant of Cited  Document   |  |  |
|                        |  | 5,827,602                           |        |            |                      | 10                        | /1998                      | Koch et al.  |  |  |
|                        |  | 5,965,054                           |        |            |                      | 10                        | /1999                      | McEwen et al.                                      |  |  |
|                        |  | 5,565,060                           |        |            |                      | 10                        | /1996                      | Austin et al.                                      |  |  |
|                        |  | 4,820,621                           |        |            |                      | 4,                        | /1989                      | Tanka et al.                                       |  |  |
|                        |  | 4,628,023                           |        |            |                      | 12                        | /1986                      | Cawston et al.                                     |  |  |
|                        |  | 4,463,071                           |        |            |                      | 7/                        | /1984                      | Gifford et al.                                     |  |  |
|                        |  | 4,714,530                           |        |            |                      | 12                        | /1987                      | Hale et al.  |  |  |
|                        |  | 4,882,244                           |        |            |                      | 11                        | /1989                      | Donahue et al.                                     |  |  |
|                        |  | 5,286,354                           |        |            |                      | 2                         | 1994                       | Bard et al.  |  |  |
|                        |  | 5,683,832                           |        |            |                      | 11                        | /1997                      | Bonhote et al.                                     |  |  |
|                        |  | 5,827,602                           |        |            |                      | 10/1998                   |                            | Koch et al.  |  |  |
|                        |  | 5,853,555                           |        |            |                      | 12/1998                   |                            | Shafifian et al.                                   |  |  |
|                        |  | 5,870,275                           |        |            |                      | 2/                        | 1999                       | Shiono et al.                                      |  |  |
|                        |  | 5,910,237                           |        |            |                      | 6/1999                    |                            | Moulton et al.                                     |  |  |
|                        |  | 5,951,845                           |        |            |                      | 9/                        | 1999                       | Moulton  |  |  |
|                        |  | 5,968,338                           |        |            |                      | 10                        | /1999                      | Hulme et al.                                       |  |  |
|                        |  | 4,913,828                           |        |            |                      | 4/                        | 1990                       | Caswell et al.                                     |  |  |
| Examiner               | Cite<br>No.                                    | FOREIGN PATENT DOCUMENTS            |        |            |                      |                           | cation Date                | Name of Patentee or Applicant of Cited<br>Document |  |  |
| Initials               |  | Country Number Kind Code (if known) |        |            | de (if known)        | MM-DD-YYYY<br>(Number 43) |                            |  |  |  |
|                        |  | WO 01/401                           | 46     |            |                      | 6/7                       | /01                        |  |  |  |
|                        |  | WO 02/267                           | '01 A2 |            |                      | 4/4                       | /02                        | ·  |  |  |
| <del></del>            |  | WO 95/218                           | 371    |            |                      | 8/1                       | 7/95                       |  |  |  |
|                        |  | WO 95/218                           | 72     |            |                      | 8/17/95                   |                            |  |  |  |
|                        |  | WO 98/061                           | 06     |            |                      | 2/1                       | 2/98                       |  |  |  |
| Examiner<br>Signature  | <u>.                                      </u> | <u> </u>                            |        |            |                      | Date<br>Con               | e<br>sidered               |  |  |  |

| 11  | NEOD      | ATION DIGG!  | OCUPE     | <b>A</b>             |                      |              | 40/040                     | PTO/SB/08A (04-03)                                 |  |
|---|-----------|--|-----------|----------------------|----------------------|--------------|----------------------------|--|--|
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT |           |  |           |                      | Application Number   |              | 10/642,437                 |  |  |
|   |           |  |           |                      | Filing Date          |              | August 15, 2003            |  |  |
|   |           |  |           |                      | First Named Inventor |              | Moulton                    |  |  |
|   |           |  |           |                      | Group Art Unit       |              | 1621                       |  |  |
|   |           |  |           | _+_                  | Examiner Name        |              | Nazario Gonzalez, Porfirio |  |  |
| Sheet 2 of 4                                  |           |  |           |                      | Attorney Docket SOU7 |              |                            | 7/4-9US  |  |
|   |           | T  | ι         | J.S. PATEN           | IT DOCUMEN           | TS           | <del></del>                | <u> </u>   |  |
| Examiner<br>Initials                          | Cite      |  | Document  | Number               | er<br>               |              | cation Date                | Name of Patentee or Applicant of Cited             |  |
|   | No.       |  |           | Kind Code (if known) |                      | DD-YYYY      | Document                   |  |  |
| <u>.</u>                                      | 4,915,854 |  |           |                      | 4/                   | 1990         | Mao et al.                 |  |  |
|   |           | 5,929,009  |           |                      |                      | 7/           | 1999                       | Gambogi  |  |
|   |           | 5,981,474  |           |                      |                      | 11           | /1999                      | Manning et al.                                     |  |
|   |           | 6,165,259  |           |                      |                      | 12           | /2000                      | Hallstrom et al.                                   |  |
|   |           | 2,181,087  |           |                      | 11                   | /1939        | Caryl, et al.              |  |  |
| •   |           | 2,507,030<br>2,072,085   |           |                      |                      | 5/           | 1950                       | Lynch et al  |  |
|   |           |  |           |                      |                      | 3/           | 1937                       | Groote et al.                                      |  |
| ·   |           | 6,306,805  |           |                      |                      | 10           | /2001                      | Bratescu et al.                                    |  |
|   |           | 4,919,839  |           |                      |                      | 4/           | 1990                       | Durbut et al.                                      |  |
|   |           | 5,415,857  |           |                      |                      | 5/           | 1995                       | Robbins et al.                                     |  |
|   |           | 5,273,840  |           |                      |                      | 12           | /1993                      | Dominey  |  |
|   |           | 4,572,769  |           |                      |                      | 2/           | 1986                       | Shimizu  |  |
| -   |           | 4,776,929  |           |                      |                      | 10           | /1988                      | Aoyama   |  |
|   |           | 6,379,634  | _         |                      | 4/                   | 2002         | Fields                     |  |  |
|   |           | 6,468,495  |           |                      | 10/2002              |              | Fields                     |  |  |
|   |           | 6,406,677  |           |                      |                      | 6/           | 2002                       | Carter, et al.                                     |  |
|   |           | 5,135,825  | 5,135,825 |                      |                      |              | 1992                       | Mori et al.  |  |
| Examiner                                      | Cite      | FOREIGN PATENT DOCUMENTS  Country Code  Number  Kind Code (if known) |           |                      |                      | 1            | cation Date                | Name of Patentee or Applicant of Cited<br>Document |  |
| Initials                                      | No.       |  |           |                      |                      | i            | mber 43)                   |  |  |
|   |           | WO 99/141  | 160       |                      |                      |              | 5/99                       |  |  |
|   | W         |  | 211       |                      |                      |              | 1/01                       |  |  |
|   |           | WO 01/133  | 379       |                      |                      | 2/2          | 2/01                       |  |  |
|   |           | WO 01/151  | 175       |                      |                      | 3/1/01       |                            |  |  |
| <u>.</u>                                      | <u> </u>  |  |           |                      |                      |              |                            |  |  |
| Examiner<br>Signature                         |           |  |           |                      |                      | Date<br>Cons | sidered                    |  |  |

| <u>-</u>              | NFORM                   | ATION DISC                     | CLOSURE           | Applie                                 | cation Number                                   |  | 10/642                         | PTO/SB/08A (04-03                                  |  |  |
|-----------------------|-------------------------|--------------------------------|-------------------|--|---|--|--------------------------------|--|--|--|
|                       |                         | MENT BY AP                     |                   | <u> </u>                               | Filing Date First Named Inventor Group Art Unit |  | August 15, 2003  Moulton  1621 |  |  |  |
|                       |                         |                                |                   |  |   |  |                                |  |  |  |
|                       |                         |                                |                   | <b> </b>                               |   |  |                                |  |  |  |
|                       |                         |                                |                   | <u> </u>                               | Examiner Name                                   |  | Nazario Gonzalez, Porfirio     |  |  |  |
| Sheet                 | Sheet 3 of 4            |                                |                   | <del></del>                            | Attorney Docket                                 |  |                                | SOU747/4-9US                                       |  |  |
|                       |                         | _                              |                   |  | IT DOCUMEN                                      | I<br>TS  |                                |  |  |  |
| Examiner              |                         | Document Number                |                   |  |   |  |                                |  |  |  |
| Initials              | nitials Cite No. Number |                                |                   | Kind Code (if known)                   | Publication Date  MM-DD-YYYY                    | Name of Patentee or Applicant of Cited<br>Document |                                |  |  |  |
| -                     |                         | 2002/0015884                   |                   |  |   | 2/7/02   |                                | Schmidt  |  |  |
|                       |                         | 2002/0010                      | )291              |  |   | 1/24/02  |                                | Murphy   |  |  |
|                       |                         | 2002/0015                      | 5883              |  |   | 2/   | 7/02                           | Hilarius   |  |  |
|                       |                         | 2002/0055                      | 5045              |  |   | 5/   | /9/02                          | Michot   |  |  |
|                       |                         | 2,446,331                      |                   |  |   | 2/   | 1944                           | Hurley   |  |  |
|                       | 5,543,522               |                                |                   |  |   | 8/   | 1996                           | Kawahara et al.                                    |  |  |
|                       |                         | 4,764,440                      |                   |  |   | 8/   | 1988                           | Jones et al.                                       |  |  |
|                       |                         |                                | <del></del>       |  |   |  | _                              |  |  |  |
|                       |                         |                                |                   |  |   |  | <del></del> -                  |  |  |  |
|                       |                         |                                |                   |  |   |  |                                |  |  |  |
|                       | <del></del>             |                                |                   |  |   |  |                                |  |  |  |
|                       | <u> </u>                |                                |                   |  | *   | 1  |                                |  |  |  |
|                       |                         |                                | ,                 |  |   |  |                                |  |  |  |
| `                     |                         |                                | ·                 |  | 7.2   |  |                                |  |  |  |
|                       |                         |                                |                   |  |   |  |                                |  |  |  |
|                       |                         | :                              |                   |  |   |  |                                |  |  |  |
|                       |                         |                                |                   |  |   |  |                                |  |  |  |
| Examiner              | Cite                    | FOREIGN PATENT DOCUMENTS       |                   |  |   |  | Publication Date MM-DD-YYYY    | Name of Patentee or Applicant of Cited<br>Document |  |  |
| Initials              | No.                     | Country Number Kind Code (if k |                   |  | de (if known)                                   | (Number 43)  |                                |  |  |  |
|                       |                         |                                | <del>" '</del> ', |  |   |  |                                |  |  |  |
|                       |                         |                                |                   |  |   |  |                                |  |  |  |
|                       |                         |                                |                   | ······································ |   |  |                                | _  |  |  |
|                       |                         |                                |                   |  |   |  |                                |  |  |  |
|                       |                         |                                |                   |  |   |  |                                |  |  |  |
| Examiner<br>Signature | ٠.                      |                                | <u>.</u>          |  |   | Date<br>Cons                                       | sidered                        |  |  |  |

| INFORMATION DISCLOSURE |  |   |        |                     | Application Number                         | 10/642,437                         |  |  |  |  |
|------------------------|--|---|--------|---------------------|--|------------------------------------|--|--|--|--|
| ,                      | STATE  | MENT BY   | APPI   | LICANT              | Filing Date                                | August 15, 2004                    |  |  |  |  |
|                        |  |   |        |                     | First Named Inventor                       | Moulton                            |  |  |  |  |
|                        |  |   |        |                     | Group Art Unit                             | 1621                               |  |  |  |  |
|                        |  |   |        |                     | Examiner Name                              | Nazario-Gonzalez, Porfirio         |  |  |  |  |
| 5                      | 4  |   | of     | 4                   | Attorney Docket Number                     | SOU747/4-9US                       |  |  |  |  |
|                        |  | <b>'</b>  |        | NON-PATEN           | T LITERATURE DO                            | CUMENTS                            |  |  |  |  |
|                        | Α  | Xu, Wu and Angell, Austen, "Novel Orthoborate Ionic Liquids," Dept. of Chem., Arizona State   |        |                     |  |                                    |  |  |  |  |
|                        | <sub>B</sub>   | <u>.                                      </u>  |        |                     | rlier than 11/7/02).  Igner Solvents Ionic | Liquids May Boost Clean Technology |  |  |  |  |
|                        | В  |   |        |                     | ology, March 30, 1998.                     | Liquids Way Boost Olean Teamlogy   |  |  |  |  |
|                        | С  | Freeman   | tle, N | lichael, "Eyes or   | lonic Liquids," Science/                   | Technology, May 15, 2000.          |  |  |  |  |
|                        | D  |   |        |                     |  | esses, p. 223-236, (1999).         |  |  |  |  |
|                        | Ε  | School of   | Che    | emistry, The Que    | ens' University of Belfas                  |                                    |  |  |  |  |
|                        | F  | Barthel, J., et al., "Lithium Bis[5-fluoro-2-olate-1-benzenesulfonato (2-)-O,O'] borate (1-), a New Anodically and Cathodically Stable Salt for Electrolytes of Lithium-Ion Cells," J. Electrochem. Soc, Vol. 145, No. 2, Feb 1998. |        |                     |  |                                    |  |  |  |  |
|                        | G  | Barthel, J., et al., "A New Class of Electrochemically and Thermally Stable Lithium Salts for Lithium Battery Electrolytes," J. of the Electrochemical Soc., 147 (1) 21:24 (2000).  |        |                     |  |                                    |  |  |  |  |
|                        | Н  | Battery E   | lectr  | olytes," J. Electro | ochem. Soc., Vol. 144, N                   |                                    |  |  |  |  |
|                        | I  | Battery E   | lectr  | olytes," J. Electro | ochem, Soc., Vol. 143, N                   |                                    |  |  |  |  |
|                        | J  | Battery E   | lectr  | olytes," J. Electro | ochem. Soc., Vol. 142, N                   |                                    |  |  |  |  |
|                        | K  |   |        |                     | s Biotech's Next Big Cha                   |                                    |  |  |  |  |
|                        | n temperature ionic liquid precursor ectronic Conference on Synthetic Organic                            |   |        |                     |  |                                    |  |  |  |  |
|                        | М  |   |        |                     |  | elected pages, November 2002.      |  |  |  |  |
|                        | N Wadhawan, Jay, D., et al, "Ionic liquid modified electrodes," Journal of Electroanalytical Chemi 2000. |   |        |                     |  |                                    |  |  |  |  |
|                        |  |   |        |                     |  |                                    |  |  |  |  |
|                        |  |   |        |                     |  |                                    |  |  |  |  |
| <del></del>            |  |   |        |                     |  |                                    |  |  |  |  |
| Examiner               |  |   |        |                     | Tr   | Date                               |  |  |  |  |
| Signature              |  |   |        |                     |  | Considered                         |  |  |  |  |